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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/954,773	09/18/2001	David A. Lightfoot	1268/2/2	8934
25297	7590	12/15/2004	EXAMINER	
JENKINS & WILSON, PA 3100 TOWER BLVD SUITE 1400 DURHAM, NC 27707			KRUSE, DAVID H	
			ART UNIT	PAPER NUMBER
			1638	

DATE MAILED: 12/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/954,773	LIGHTFOOT ET AL.
	Examiner	Art Unit
	David H Kruse	1638

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 08 September 2004.
- 2a) This action is **FINAL**.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 38-44 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 38-44 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                    | Paper No(s)/Mail Date. _____.   |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____. | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|   | 6) <input type="checkbox"/> Other: _____.                                   |

## **DETAILED ACTION**

1. This Office action is in response to the Amendment and Remarks filed 8 September 2004.
2. The new Abstract submitted 8 September 2004 is approved by the Examiner.
3. Those rejections or objections not specifically addressed in this Office action are withdrawn in view of Applicant's amendments to the claims and specification.
4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

### ***Claim Rejections - 35 USC § 112***

5. Claims 38, 40 and 42 remain rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 38 and 40 remain indefinite because the metes and bounds of the relative limitation "a low density inoculum" remains unclear. Applicants argue that the claims must be read in view of the specification, and given the teachings of the specification and the knowledge of the skilled artisan, applicants respectfully submit that one of ordinary skill in the art would recognize the nature of a "low density inoculum" (page 9 of the Remarks). This argument is not found to be persuasive. Applicant teaches three specific inoculum densities on page 81, lines 8-9 of the specification. Medium is taught as  $5 \times 10^3$  and low as  $3.3 \times 10^3$ , but it is unclear from the specification if low density would encompass any density less than  $5 \times 10^3$ , or equal to or less than  $3.3 \times 10^3$ .

Claim 42 remains indefinite because the metes and bounds of the limitation "determining the level of resistance" is indefinite. Applicants argue that the claims must be read in view of the specification, and further that given the teachings of the specification and the knowledge of the skilled artisan, one of ordinary skill in the art would understand the metes and bounds of "determining a level of resistance" (page 13 of the Remarks). This argument is not found to be persuasive because the specification provides no guidance on what the metes and bounds of this limitation are. Because a level of resistance determination would be relative to the method used, Applicant must teach the metes and bounds of resistance to soybean sudden death syndrome, because such resistance encompasses a spectrum of values, from low to high, and the level of resistance would be relative to what one of skill in the art would consider acceptable.

6. Claim 44 is rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. At line 2, the limitation "2,6-dichloro-4-nitroaniline" is not supported by the specification and is New Matter. Appropriate correction is required.

7. Claims 38-40 remain rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to

which it pertains, or with which it is most nearly connected, to make and/or use the invention. This rejection is repeated for the reason of record as set forth in the last Office action mailed 8 March 2004. Applicant's arguments filed 8 September 2004 have been fully considered but they are not persuasive.

Applicants argue that the quantity of experimentation that would be required to practice the instant invention is merely that which would be expected to test the resistance to SDS in soybeans, and that the specification contains numerous working examples that show the exact procedures to be followed in performing such tests (page 15, 2<sup>nd</sup> paragraph of the Remarks). This argument does not address the issue that a moderate inoculum rate of 4000-5000 spores per cubic centimeter, as taught in the art, allows one of skill in the art to identify SDS resistant soybean plants with a minimal of additional experimentation. The Examiner notes that the entity Njiti *et al* 2001 comprising one member of the instant inventive entity, D.A. Lightfoot. Njiti *et al* 2001 provides evidence that Applicant had not perfected the instant invention at the time of filing and that additional experimentation by another, using a broader range of soybean plants, was required and that the results of said additional experimentation resulted in a different inoculum rate than that encompassed by the instant claims. Njiti *et al* 2001 teach that due to the nature of the invention it required almost 3.5 years of additional experimentation to perfect the method (see page 1727, left column, 3<sup>rd</sup> paragraph). Finally, Njiti *et al* 2001 teaches away from the use of a low-density inoculum in the claimed method.

Applicants argue that the specification teaches how to screen soybean lines and the extent of experimentation that would be necessary to screen any two lines is precisely the same in each case, and that 20% of the experiments might give imperfect results, this does not imply that the experimentation necessary to practice the method is undue (page 15, 3<sup>rd</sup> paragraph of the Remarks). This argument is not found to be persuasive for the reason given supra.

***Claim Rejections - 35 USC § 103***

8. Claims 41 and 42 remain rejected and claims 43 and 44 are rejected under 35 U.S.C. § 103(a) as obvious over Stephens *et al* 1993 (Crop Science 33:63-66). This rejection is repeated for the reason of record as set forth in the last Office action mailed 8 March 2004, and modified in view of Applicant's argument as directed to the rejection under 35 U.S.C. § 102(b). Applicant's arguments filed 8 September 2004 have been fully considered but they are not persuasive as directed to the rejection under 35 U.S.C. § 103(a).

Applicants argue that in order to render a claim obvious under 35 U.S.C. § 103(a), the cited references must disclose or suggest each and every element of the claim, as well as motivate the skilled artisan to modify the references as suggested by the Patent Office to arrive at the claimed invention with a reasonable expectation of success (page 17, 1<sup>st</sup> paragraph of the Remarks). This argument is not found to be persuasive because obviousness may be found without something specific in the prior art reference which would lead an inventor to combine the teachings with another piece of art (see *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992)) or that

would have been obvious to one of ordinary skill in the art at the time of Applicant's invention. In the instant case, evaluating the number of *Fusarium solani* colony forming units on a culture plant using the method of Stephens *et al* would have been, in the Examiner's opinion, obvious to one of ordinary skill in the art at the time of the invention. The limitation "by statistically evaluating" in step (c) of claim 41 is read broadly, and could be merely counting and comparing a plate from one isolated root with a plate from another isolated root, but could also be doing an average of several plates of one isolated root and comparing the average from plates of another root. Such a rudimentary statistical analysis would be obvious to one of ordinary skill in the art. At the time of Applicant's invention, it would have been routine for one of ordinary skill in the art to do a numerical comparison, especially using averages between multiple plates from a single root. Stephens *et al* teach that the method was used to confirm that the transferred soil produced SDS symptoms on susceptible cultivars, clearly suggesting that on resistant cultivars the presence of colony forming units would be absent or significantly lower than on susceptible cultivars (see paragraph spanning left and right columns on page 64).

Applicants argue that the cited reference does not provide a motivation to statistically evaluate the number of CFU (page 17, 2<sup>nd</sup> paragraph of the Remarks). This argument is not found to be persuasive for the reasons given *supra*.

Applicant states, as directed to the instant claims, including new claims 43 and 44, that none of the cited art discloses the use of a medium that contains both anti-fungal and anti-bacterial agents (pages 17 and 18 of the Remarks). This argument is

not found to be persuasive because Stephens *et al* teach using tetracycline in the medium to inhibit microbial growth, and culture at room temperature to slow the growth of fungal colonies. Stephens *et al* also discloses the use of Tergitol NP-10 in the medium, which was known to those of ordinary skill in the art at the time of Applicant's invention to slow fungal growth.

***Conclusion***

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

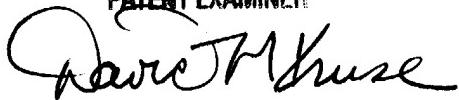
10. No claims are allowed.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David H. Kruse, Ph.D. whose telephone number is (571) 272-0799. The examiner can normally be reached on Monday to Friday from 8:00 a.m. to 4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Amy Nelson can be reached at (571) 272-0804. The fax telephone number for this Group is (703) 872-9306 Before Final or (703) 872-9307 After Final.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group Receptionist whose telephone number is (571) 272-0547.

DAVID H. KRUSE, PH.D.  
PATENT EXAMINER



David H. Kruse, Ph.D.  
2 December 2004

12. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to (571) 272-0547.

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